BEFORE
THE PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

DOCKET NO. 2018-318-E

In the Matter of:	)	
	)	**MOTION FOR LEAVE TO FILE**
Application of Duke Energy Progress,	)	**DIRECT TESTIMONY OF**
LLC for Adjustments in Electric Rate	)	**JULIE K. TURNER ADOPTING**
Schedules and Tariffs	)	**THE DIRECT TESTIMONY OF**
	)	**JOSEPH A. MILLER JR.**

Duke Energy Progress, LLC ("Duke Energy Progress" or "Company") moves for leave to file direct testimony for Company witness Julie K. Turner, Vice President of Carolinas Natural Gas Generation for Duke Energy, in order to allow the witness to adopt the pre-filed direct testimony of witness Joseph A. Miller Jr. In support of this Motion, Duke Energy Progress respectfully shows the Commission the following:

On November 8, 2018, the Company filed its Application for Adjustments in Electric Rate Schedules and Tariffs and Request for an Accounting Order, supporting direct testimony and exhibits, and Form E-1 data. The pre-filed direct testimony includes the testimony of Company witness Joseph A. Miller Jr.

Due to Mr. Miller transitioning to a different role in Duke Energy effective January 14, 2019, the Company respectfully requests that Ms. Turner be allowed to adopt the testimony of Mr. Miller.

The Company proposes for Ms. Turner to adopt Mr. Miller's testimony in full (with the exception of the addition of Ms. Turner's Introduction and Overview section as indicated on page 2, line 1 through page 3, line 6 of Ms. Turner's testimony). The proposed direct testimony of Ms. Turner is attached to this Motion.

Given that Ms. Turner would adopt testimony previously pre-filed with its Application in this docket, the Company asserts that no party will be prejudiced by this Motion.

WHEREFORE, Duke Energy Progress respectfully requests leave to file the attached direct testimony of Julie K. Turner in this proceeding.

Respectfully submitted this 11th day of February, 2019.

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ATTORNEYS FOR DUKE ENERGY PROGRESS, LLC

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2018-318-E

In the Matter of:	)	
	)	**DIRECT TESTIMONY OF**
Application of Duke Energy Progress, LLC	)	**JULIE K. TURNER FOR**
for Adjustments in Electric Rate Schedules	)	**DUKE ENERGY PROGRESS, LLC**
and Tariffs	)	

I. INTRODUCTION AND OVERVIEW

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Julie K. Turner and my business address is 411 Fayetteville Street, Raleigh, North Carolina.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am Vice President of Carolinas Natural Gas Generation for Duke Energy Progress, LLC ("DE Progress").

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I graduated from North Carolina State University with a Bachelor of Science degree in Mechanical Engineering and received a Masters degree in Business Administration from the University of Colorado. My career began with Duke Energy (d/b/a Carolina Power & Light) in 1991 as a staff engineer at DE Progress' Harris Nuclear Station. Since that time, I have held various roles of increasing responsibility in the generation engineering, maintenance, and operations areas, including the role of Station Manager, first at DE Progress' Lee Energy Complex, followed by leading six DE Progress natural gas generating stations. I assumed by current role in 2016.

Q. WHAT ARE YOUR DUTIES AS VICE PRESIDENT OF CAROLINA NATURAL GAS GENERATION?

A. In this role, I am responsible for providing safe, reliable and event-free operations of Duke Energy's fleet of natural gas generation facilities in South Carolina and North Carolina, which produces over 10,000 MWs. My

responsibilities include operating and maintaining the fleet within design parameters and implementing safe work practices and procedures to ensure the safety of our employees.

Q. HAVE YOU TESTIFIED BEFORE THIS COMMISSION IN ANY PRIOR PROCEEDINGS?

A. No.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to support DE Progress' request for a base rate adjustment. My testimony will describe the Company's Fossil/Hydro/Solar generation assets; provide operational performance results for the period of January 1, 2017 through December 31, 2017 (the "Test Period"); update the Commission on capital additions; explain the key drivers impacting operations and maintenance ("O&M") expenses; and provide a high-level view of capital planned for the next few years for Fossil/Hydro/Solar generation asset investments.

Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

A. The remainder of my testimony is organized as follows:

II. FOSSIL/HYDRO/SOLAR FLEET

III. CAPITAL ADDITIONS

IV. O&M AND OTHER ADJUSTMENTS

V. PERFORMANCE

VI. CAPITAL BUDGET AND COST DRIVERS

VII. CONCLUSION

II. FOSSIL/HYDRO/SOLAR FLEET

Q. PLEASE DESCRIBE DE PROGRESS' FOSSIL/HYDRO/SOLAR GENERATION FLEET.

A. The Company's Fossil/Hydro/Solar fleet consists of 9,217 MWs of owned generating capacity, made up as follows:

Coal-fired -	3,544 MWs
Combustion Turbines -	2,816 MWs
Combined Cycle -	2,568 MWs
Hydro -	227 MWs
Solar -	62 MWs[1]

The 3,544 MWs of coal-fired generation resources represent three generating stations and a total of seven units. These units are equipped with emission control equipment, including selective catalytic reduction ("SCR") equipment for removing nitrogen oxides ("NO_x"), flue gas desulfurization ("FGD" or "scrubber") equipment for removing sulfur dioxide ("SO_2"), and low NO_x burners. This inventory of coal-fired assets with emission control equipment enhances the Company's ability to maintain current environmental compliance and concurrently utilize coal with increased sulfur content; thereby providing flexibility for DE Progress to procure the most cost-effective options for fuel supply.

[1] This value represents the relative dependable capacity contribution to meeting summer peak demand, based on the Company's integrated resource planning metrics. The nameplate capacity of the Company's solar facilities is 141 MWs.

DE Progress has a total of 32 simple cycle combustion turbine ("CT") units, the larger 14 of which provide 2,183 MWs. These 14 units are located at the Asheville (NC), Darlington (SC), Smith Energy (NC) and Wayne County (NC) facilities, and are equipped with water injection and/or low NO_x burners for NO_x control. The 2,568 MWs shown above as "Combined Cycle" ("CC") represent four power blocks. The HF Lee Energy Complex CC power block ("HF Lee CC") has a configuration of three CTs and one steam turbine. The two power blocks located at the Smith Energy Complex ("Richmond CC") consist of two CTs and one steam turbine each. The Sutton Combined Cycle at Sutton Energy Complex ("Sutton CC") consists of two CTs and one steam turbine. The four CC power blocks, are equipped with SCR equipment, and all nine CTs have low NOx combustors.

The Company's hydro fleet consists of 15 units providing 227 MWs of capacity and its solar fleet consists of four sites with 141 MWs of nameplate capacity which provide 62 MWs of relative dependable capacity.

Q. WHAT CAPACITY CHANGES HAVE OCCURRED WITHIN THE FLEET SINCE THE 2016 RATE CASE?

A. The Company's recent addition of two new Sutton CTs in July 2017 provides an additional 78 MWs of capacity to the Company's fleet. In addition to plant retirements mentioned in Docket No. 2016-227-E, DE Progress has retired three older CT units at Sutton CT and three older units at Darlington CT, which reduced capacity by 212 MWs.

Q. WERE UPDATES MADE TO THE PROBABLE RETIREMENT DATES OF FOSSIL HYDRO PLANTS INCLUDED IN THE RECENT DEPRECIATION STUDY?

A. Yes. There were updates made to the probable retirement dates. The Tillery and Blewett hydro plants dates were updated to align with the expiration of the Yadkin-Pee Dee operating license. The Marshall hydro plant date was updated to be consistent with 125-year total projected life. There was a reduction in probable retirement dates for the Roxboro coal plant to better align with the industry information for subcritical coal units and assumptions for future environmental regulations. The Weatherspoon CTs, Blewett CTs and the remaining smaller Darlington units retirement dates were updated due to aging technology at these sites. The probable retirement dates for the Sutton CT units were updated to 2017 to align with the July 2017 in-service date of the new Sutton CTs. Asheville Units 1 and 2 are expected to retire at the end of 2019 when the new Asheville Combined Cycle plant ("Asheville CC") comes online. The Asheville CC, which consists of two efficient 280 MW combined-cycle dual fuel 1x1 power blocks, is located in Buncombe County at the site of the Asheville Steam Electric Generating Plant.

III. CAPITAL ADDITIONS

Q. PLEASE DESCRIBE THE MAJOR FOSSIL/HYDRO/SOLAR CAPITAL PROJECTS COMPLETED SINCE THE COMPANY'S LAST RATE CASE PROCEEDING.

A. The major Fossil/Hydro/Solar capital projects in service and included in this request total approximately $201 million. The addition of the Sutton CTs, totaling approximately $101 million, feature state-of-the-art technology for increased efficiency and reduced emissions. DE Progress also made capital additions at Roxboro Station to convert to a dry bottom ash system to comply with the Coal Combustion Residual Rule ("CCR"), totaling approximately $100 million.

Q. DID THE COMPANY RECEIVE REGULATORY APPROVAL FOR THE CONSTRUCTION OF THE COMPLETED GENERATION FACILITIES INCLUDED IN THIS CASE?

A. Yes. The Sutton CTs were granted a certificate of public convenience and necessity ("CPCNs") by the North Carolina Utilities Commission ("NCUC") in Docket No. E-2, Sub 1066.

Q. MS. TURNER, ARE THESE CAPITAL ADDITIONS USED AND USEFUL IN PROVIDING ELECTRIC SERVICE TO DE PROGRESS' ELECTRIC CUSTOMERS IN SOUTH CAROLINA?

A. Yes. The Company's new Sutton CTs are commercially operational providing electric service to customers. The new Sutton CTs feature state-of-the-art technology for increased efficiency and reduced emissions, blackstart and fast start capabilities, and provide offsite power to Brunswick Nuclear Station.

Q. IN YOUR OPINION, HAVE THE COSTS RELATED TO THE COMPANY'S CAPITAL ADDITIONS BEEN PRUDENTLY INCURRED?

A. Yes. The Company controls costs for capital projects and O&M utilizing a cost management program. The Company controls costs through routine executive oversight of project budget and activity reporting with new projects requiring approval by progressively higher levels of management depending on total project cost. The Company controls ongoing project and O&M costs through strategic planning and procurement; efficient oversight of contractors by a trained and experienced workforce; rigorous monitoring of work quality; thorough critiques to drive out process improvement; and, industry benchmarking to ensure best practices are being utilized.

Q. HOW DO CUSTOMERS BENEFIT FROM THE COMPANY'S MODERNIZATION EFFORTS FOR THE FOSSIL/HYDRO/SOLAR FLEET?

A. Our customers benefit from DE Progress' modernization efforts in multiple ways. Initially, as demonstrated by the Company's resource planning analyses, the Company's fleet modernization efforts have enabled it to continue to provide safe, efficient and reliable service to DE Progress' customers at least reasonable cost. These efforts have also reduced the Company's environmental footprint by adding state-of-the-art technology for reducing emissions, retiring older facilities that lacked environmental equipment and were not economically positioned for needed capital

expenditures, and expanding the use of natural gas generation at a time when the natural gas market is providing historically low prices.

IV. O&M AND OTHER ADJUSTMENTS

Q. PLEASE DESCRIBE THE O&M EXPENSES FOR THE FOSSIL/HYDRO/SOLAR FLEET.

A. For the fossil units, approximately 82 percent of DE Progress' required O&M expenditures are fuel-related for the Test Period. The majority of non-fuel expenditures are for labor costs from Company or contract resources that operate, maintain and support the Fossil/Hydro/Solar facilities. Finally, the Company continues to be challenged by costs driven by inflationary pressures for labor and materials.

Q. HOW DOES THE COMPANY CONTROL AND MITIGATE O&M EXPENSE INCREASES? PLEASE PROVIDE EXAMPLES.

A. The Company has many efforts in place for controlling and/or minimizing costs. For example, DE Progress optimizes outages based on run time, which has been affected by: (1) changes in the gas market; (2) milder than normal weather during 2016 - 2017; and (3) new generation resources that further increased DE Progress' use of natural gas. This effort has provided savings with labor and material costs.

Duke Energy joined forces with other power companies to share best practices and learning opportunities with the Fossil Networking Group ("FNG"). The FNG includes Southern Company, Dominion Resources,

American Electric Power and the Tennessee Valley Authority, who along with the Company, have seen benefits around safety and operations.

The Company runs its business in a disciplined manner and continuously balances cost management with safety and reliability to provide generation to our customers. Cost to customers is a key concern and the Company's diverse portfolio allows us to reduce overall fuel expense and take advantage of low natural gas prices.

V. PERFORMANCE

Q. PLEASE DISCUSS THE OPERATIONAL RESULTS FOR DE PROGRESS' FOSSIL/HYDRO/SOLAR FLEET DURING THE TEST PERIOD.

A. The Company's Fossil/Hydro/Solar generating units operated efficiently and reliably during the Test Period. Several key measures are used to evaluate the operational performance depending on the generator type: (1) equivalent availability factor ("EAF"), which refers to the percent of a given time period a facility was available to operate at full power, if needed (EAF is not affected by the manner in which the unit is dispatched or by the system demands; it is impacted, however, by planned and unplanned maintenance (*i.e.*, forced) outage time); (2) equivalent forced outage rate ("EFOR"), which represents the percentage of unit failure (unplanned outage hours and equivalent unplanned derated hours); a low EFOR represents fewer unplanned outage and derated hours, which equates to a higher reliability measure; and, (3)

starting reliability ("SR"), which represents the percentage of successful starts.

The chart below provides operational results categorized by generator type, as well as results from the most recently published North American Electric Reliability Council ("NERC") Generating Unit Statistical Brochure ("NERC Brochure") representing the period 2013 through 2017. The NERC data reported for the coal-fired units represents an average of comparable units based on capacity rating. Overall, the data in the chart reflects that DE Progress results were comparable or better than the NERC 5-year comparisons.

Generator Type	Measure	Review Period	2013-2017	Nbr of Units
		DEP Operational Results	NERC Average	
Coal-Fired Test Period	EAF	81.0%	81.6%	418
	EFOR	7.7%	8.0%	
2017 Summer	Coal-Fired EAF	90.5%	n/a	n/a
	Combined Cycle EAF	85.1%	n/a	n/a
Total CC Average	EAF	85.7%	85.0%	338
	EFOR	0.86%	5.3%	
Total CT Average	EAF	81.6%	87.8%	776
	SR	99.1%	98.1%	
Hydro	EAF	94.6%	80.4%	1,113

Q. HOW MUCH GENERATION DID EACH TYPE OF GENERATING FACILITY PROVIDE FOR THE TEST PERIOD?

A. For the Test Period, DE Progress' system total generation was approximately 61.4 million megawatt-hours ("MWHs"). The Fossil/Hydro/Solar fleet provided approximately 31.9 million MWHs, or approximately 52 percent. The breakdown includes approximately 14 percent contribution from the coal-

fired stations, 37 percent from gas facilities, and approximately 1 percent from renewable facilities, primarily hydro.

Q. IN YOUR OPINION, HAS DE PROGRESS PRUDENTLY OPERATED ITS FOSSIL/HYDRO/SOLAR FLEET DURING THE TEST PERIOD?

A. Yes. The Company's performance data supports the conclusion that DE Progress has reasonably and prudently operated and maintained its Fossil/Hydro/Solar resources to maximize unit availability, minimize fuel costs and provide safe and reliable service to its customers.

VI. CAPITAL BUDGET AND COST DRIVERS

Q. WHAT IS THE ANTICIPATED CAPITAL BUDGET FOR FOSSIL/HYDRO/SOLAR OPERATIONS OVER THE NEXT THREE-YEAR PERIOD?

A. In order to continue to provide reliable service to customers, DE Progress plans to invest approximately $730 million in its Fossil/Hydro/Solar fleet during the period 2019 - 2021. Key efforts included in this projection are costs to complete the new Asheville CC and maintenance capital on existing plants.

VII. CONCLUSION

Q. IS THERE ANYTHING YOU WOULD LIKE TO SAY IN CLOSING?

A. Yes. The Company has a proven history of experience-based, safe, quality and cost competitive operations of a diverse generation portfolio. The Company has been active and diligent in its modernization efforts to ensure the right investments that continue, and build on, DE Progress' solid history of safely providing reliable, efficient and cost-effective generation, while

reducing environmental impacts and ensuring compliance with state and federal regulations. The diversity of the Company's generation assets provides significant benefit to customers in an economic dispatch environment, especially with the natural gas market continuing to experience low prices. DE Progress is positioned to continue as a leader in the industry with a solid base of knowledge and experience. This base rate increase will allow the Company to continue the tradition of operational excellence and focus on safe operations and reliable generation.

Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes.